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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,681

07/20/2006

Gyuyoung Han

126587-06091309

6543

22429

7590

08/26/2008

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EXAMINER

ISSING, GREGORY C

ART UNIT

PAPER NUMBER

3662

MAIL DATE

DELIVERY MODE

08/26/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/586,681	HAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Gregory C. Issing	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/9/07, 7/20/06</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

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1. The preliminary amendment filed 7/20/06, is acknowledged and entered.
2. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the specification appears to be a literal translation from a foreign language and includes grammatical and idiomatic errors. Due to the lack of clarity in the description of the invention, a clear understanding of the invention is difficult.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

3. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.
4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

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1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

8. In claim 1, step (c) is insufficiently disclosed in the specification. Additionally, step (d) is insufficiently disclosed particularly since it is not clear how a “phase” is compared to a “code” to responsively transmit PN code phase. Lastly, the specification is insufficiently disclosed with respect to how location information is obtained on the basis of a phase from the GPS terminal.

9. Accordingly, the apparatus claims are insufficiently disclosed for the same.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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12. The language “location detectors” is misdescriptive since it is not clear how any “detection” is performed by such. As best understood, these elements appear to be transmitters. It is not clear what is meant by “location detectors for applying and sending offsets, respectively.” Furthermore, the claims fail to clearly set forth what the "offsets" are and what they are offset from.

13. In claim 1, step (a) the language “*allowing* the GPS terminal . . . to obtain a reference pilot signal” fails to clearly and definitely claim the subject matter due to the lack of clarity of the use of “allowing.” As written, the meaning of the step appears simply to mean that the GPS terminal is on as opposed to off so as to “allow” the terminal to have the capability to receive signals.

14. In claim 1, step (b), it is not clear what the “transmitting information” corresponds to, what it represents, or what the scope of such is. In step (c), the language fails to clearly and distinctly define the subject matter.

15. In claim 16, the claim limitation is contradictory to the independent claim’s limitation “in a satellite invisible area.” Since the base claim defines a method in a GPS satellite invisible area, the reception and use of GPS signals, as set forth in claim 16, directly contradicts and fails to further limit the limitations of the base claim. Thus, these claims have not been examined with respect to prior art. Note, however, that Stein et al is applicable to the use of GPS signals as well.

16. The apparatus claims contain problems similar to the method claims, claim 17 and 30.

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18. Claims 1-15, 17-29, and 31-32 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Stein et al (7,139,580).

19. Stein et al disclose the claimed method and system, as best understood, including a mobile terminal 106 (Figure 7), base transceiver stations 104, repeaters 114/116 (Figure 3), and position determination entity PDE 130 (Figure 8) having a data storage unit 830 for determining the location of a mobile terminal within a building where GPS satellites are not visible. Each repeater, which corresponds to the claimed location detectors, is assigned a unique identification code and can comprise pseudo-noise sequences at defined offsets. Additionally, the repeaters generate a pilot reference which is used by the terminals to perform coherent demodulation, channel estimation and other functions. The power level of the repeaters is controlled so as to have a balance between interference with other repeaters and a level allowing terminals within a predetermined range to receive such. The terminal transmits the codes of received signals from the repeaters to the PDE, which uses such to determine the location of the terminal in association with a data storage unit that maps the repeaters, i.e. associates offsets, coverage zones, positions, etc. The techniques may be used in various CDMA systems, e.g. IS-801, IS-95, W-CDMA and cdma2000.

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

21. Schuchman et al (RE38,808) disclose a positioning system for location a mobile terminal using a plurality of PN coded spread spectrum stations wherein each station transmits a signal

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with a unique phase offset in the code relative to a 1 msec epoch so as to provide a unique signature. Abbott (5,959,575) discloses an interior navigation system and method wherein a plurality of indoor pseudolites, i.e. the claimed location detectors, transmit signals to a mobile terminal that receives the signals and uses a memory circuit storing the codes of the pseudolites to derive information related to location for determining the position of the mobile terminal. Speasl et al (5,815,114) disclose an indoor position determining method and system (see Figure 9). Bruno et al (5,604,765) disclose a position enhanced system and method for determining the location of a mobile terminal either inside or outside.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (571)-272-6973. The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Gregory C. Issing/  
Primary Examiner  
Art Unit 3662

gci